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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/078,877
Filing Date: February 19, 2002
Appellant(s): LIN ET AL.

Jorge Tony Villabon
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/21/08 appealing from the Office action

mailed 09/27/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,023,924	Keller et al.	04-2006
5,949,948	Krause et al.	09-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al. (Keller) (7,023,924).

As to claim 1, Keller discloses a method of performing a trick mode (pause mode; column 2, line 45-column 3, line 6) comprising the steps of:

receiving a trick mode command (column 38, lines 13-17);

searching the plurality of original pictures in the video signal for a picture compatible with the trick mode (searching for the next I-frame; column 38, lines 13-17 and Fig. 33, step 541);

initiating the trick mode once the compatible picture is located (Fig. 33, steps 542-544; column 38, lines 44-65).

As to claim 2, Keller discloses wherein the compatible picture is an intra picture (an I-frame; column 38, lines 13-19; column 14 lines 29-33).

As to claim 3, Keller discloses wherein the compatible picture is a predictive picture (P-freeze frames; Fig. 32; column 38, lines 1-21).

As to claim 4, Keller discloses wherein the trick mode is a freeze (pause) trick mode (column 38, lines 1-65; Fig. 33) and said method further comprises the step of repeating the compatible picture for the duration of the trick mode to form a trick mode signal (column 38, lines 1-65, Fig. 33, step 545).

As to claim 5, Keller discloses wherein said repeating step further comprises the step of repeating the compatible picture for the duration of the trick mode by inserting into the video signal dummy pictures predicted from the compatible picture to form the trick mode video signal (column 38, lines 1-65, Fig. 33, step 545).

As to claim 6, Keller discloses wherein each of the plurality of original pictures contains a display indicator (Fig. 33, step 545, column 38, lines 54-65) and said method further comprises the step of selectively modifying the display indicator of the original pictures that follow the compatible picture when a dummy picture is inserted into the video signal (modifying the transport stream to maintain continuity; Fig. 33, step 545, column 38, lines 54-65).

As to claim 7, Keller discloses wherein the dummy pictures are dummy predictive pictures (column 38, lines 54-65).

As to claim 8, Keller discloses wherein the compatible picture is an intra picture (I-frame; column 38, lines 13-19; column 14 lines 29-33) and said method further comprises the step of selectively inserting the compatible I picture into the trick mode signal (column 38, lines 1-65, Fig. 33).

As to claim 9, Keller discloses wherein at least a portion of the trick mode is decoded by a remote decoder (to decode and display the MPEP encoded stream; Fig. 1, column 5, line 49-column 2, line 15).

As to claim 10, Keller discloses a method of performing a trick mode (pause mode; column 2, line 45-column 3, line 6) comprising the steps of:

receiving a trick mode command (column 38, lines 13-17);

searching the plurality of original pictures in the video signal for a picture compatible with the trick mode (searching for the next I-frame; column 38, lines 13-17 and Fig. 33, step 541);

initiating the trick mode once the compatible picture is located (Fig. 33, steps 542-544; column 38, lines 44-65);

wherein the trick mode command is a freeze (pause) trick mode (Fig. 33; column 38, lines 13-65).

As to claim 11, Keller discloses a system for performing a trick mode on a video signal containing a plurality of original pictures (Fig. 1), comprising:

a controller (35) for reading data from a storage medium (34) and generating the video signal (column 6, lines 1-14); and

a video processor (27), wherein the processor is programmed to:

receive a trick mode command (column 38, lines 13-17);

search the plurality of original pictures for a picture in the video signal compatible with the trick mode (searching for the next I-frame; column 38, lines 13-17 and Fig. 33, step 541); and

initiate the trick mode once the compatible picture is located (Fig. 33, steps 542-544; column 38, lines 44-65).

As to claim 12, Keller discloses wherein the compatible picture is an intra picture (an I-frame; column 38, lines 13-19; column 14 lines 29-33).

As to claim 13, Keller discloses wherein the compatible picture is a predictive picture (P-freeze frames; Fig. 32; column 38, lines 1-21).

As to claim 14, Keller discloses wherein the trick mode is a freeze (pause) trick mode (column 38, lines 1-65; Fig. 33) and the processor is further programmed to

repeat the compatible picture for the duration of the trick mode to form a trick mode

signal (column 38, lines 1-65, Fig. 33, step 545).

As to claim 15, Keller discloses wherein the processor is further programmed to

repeat the compatible picture for the duration of the trick mode by inserting into the

video signal dummy pictures predicted from the compatible picture to form the trick

mode video signal (column 38, lines 1-65, Fig. 33, step 545).

As to claim 16, Keller discloses wherein each of the plurality of original pictures

contains a display indicator (Fig. 33, step 545, column 38, lines 54-65) and the

processor is further programmed to selectively modify the display indicator of the

original pictures that follow the compatible picture when a dummy picture is inserted into

the video signal (modifying the transport stream to maintain continuity; Fig. 33, step

545, column 38, lines 54-65).

As to claim 17, Keller discloses the method wherein the dummy pictures are

dummy predictive pictures (column 38, lines 54-65).

As to claim 18, Keller discloses wherein the compatible picture is an intra picture

(I-frame; column 38, lines 13-19; column 14 lines 29-33) and the processor is further

programmed to selectively insert the compatible I picture into the trick mode signal

(column 38, lines 1-65, Fig. 33).

As to claim 19, Keller discloses a remote decoder for decoding at least a portion of the trick mode video signal (to decode and display the MPEP encoded stream; Fig. 1, column 5, line 49-column 2, line 15).

Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Krause et al. (Krause) (5,949,948).

As to claim 1, Krause discloses a method of performing a trick mode (Fig. 2; column 7, line 47-column 8, line 63) comprising the steps of:

receiving a trick mode command (column 6, lines 48-59);

searching the plurality of original pictures in the video signal for a picture compatible with the trick mode (searching for the next I-frame; column 7, line 47-column 8, line 63);

initiating the trick mode once the compatible picture is located (column 7, line 47-column 8, line 63).

As to claim 2, Krause discloses wherein the compatible picture is an intra picture (an I-frame; column 7, line 47-column 8, line 63).

As to claim 11, Krause discloses a system for performing a trick mode on a video signal containing a plurality of original pictures (Fig. 1), comprising:

a controller (130) for reading data from a storage medium (140) and generating the video signal (column 6, lines 28-59); and

a video processor (130), wherein the processor is programmed to:

receive a trick mode command (column 6, lines 48-59);

search the plurality of original pictures for a picture in the video signal compatible

with the trick mode (searching for the next I-frame; column 7, line 47-column 8, line 63);

and

initiate the trick mode once the compatible picture is located (column 7, line 47-

column 8, line 63).

As to claim 12, Krause discloses wherein the compatible picture is an intra

picture (an I-frame; column 7, line 47-column 8, line 63).

(10) Response to Argument

a.   On pages 18-21, appellant argues that Keller merely teaches extracting an

I-frame from the original stream and fails to disclose "searching the plurality of

original pictures in the video signal for a picture compatible with the trick mode".

In response, Keller specifically discloses wherein, upon initiation of a

pause request, the server *finds* the next I-frame in the stream (column 38, lines

13-17). Thus, Keller clearly meets the limitation of "searching" the plurality of

original pictures, as the system is actively looking through the incoming frames to

identify the desired one, which is by definition a "search". It is unclear how the

system would "find" the desired frame with looking or "searching" for it.

Furthermore, it is noted that appellant's own specification merely indicates

that a "search" is performed to "locate" a compatible picture, which may be an I

picture (page 10, lines 5-18). No specific search technique is ever defined or

required, merely the ability to "search" for an I picture. As Keller's system will find

an I frame, it clearly meets the broad requirement of "searching", as the very

action of locating the desired frame constitutes a search.

b.   On page 21, appellant argues that in Keller, "a next I frame is

automatically extracted from the original picture regardless of whether a P frame

can be used as a compatible picture to predict other pictures in the video signal

for performing a trick mode such as a pause or freeze command as taught and

claimed by the applicant".

In response, as indicated above, "finding" the next I frame clearly meets

the limitation of "searching" as the act of actively looking to locate something (in

this case an I frame) is the very definition of a search.

Regarding appellant's arguments towards the use of an I frame

"regardless of whether a P frame can be used as a compatible picture", it is

noted that:

i.   The claims merely require searching for "a picture compatible with

the trick mode". There is no requirement for any particular picture type or

location within the stream. More specifically, the claims merely require

searching for "a picture". This picture, as claimed, need not be the first, or

even tenth, to occur next within the stream. Thus, as per the current

claims, *any* picture may be searched for which is "compatible" with the trick mode.

ii.   The claims place no limit on what types of pictures qualify as "compatible pictures". In this case, Keller discloses that I frames are compatible with his pause mode. Thus, Keller searches for the next I frame so as to successfully perform the pause. This clearly meets the claim limitations as the I frame is fully "compatible" with Keller's pause mode. Furthermore, appellant's own specification defines a compatible picture as a "I picture or a P picture". Thus, as Keller finds an I picture, he clearly meets the claim limitations.

c.   On pages 21-22, appellant argues that Keller fails to teach or suggest delaying the trick mode until the compatible picture is found.

In response, it is noted that Keller explicitly discloses delaying the trick mode until the compatible picture is found, as seen in Fig. 33.

First, a pause request is received (Fig. 33; column 38, lines 13-17).

Second, the next I-frame is found (Fig. 33, step 541; column 38, lines 13-17).

Third, the system creates the pause GOP (Fig. 33, steps 542-543; column 38, lines 17-56).

Fourth, the system seamlessly splices the pause GOP into the video stream, thus enabling the pause trick mode (Fig. 33, step 544; column 38, lines 56-59).

Keller clearly discloses delaying the trick mode until the compatible picture is found, as the pause trick mode cannot be enabled upon the I-frame is found and processed. Therefore, Keller clearly meets the claim limitations.

d.   In response to appellant's arguments on pages 22-36, regarding claims 2-19, see (a)-(c) above, where it is clearly shown how Keller meets the current claim limitations.

e.   On pages 39-40, appellant argues that Krause merely discloses referring to a stored Table to determine what type of frames are needed for a specified playback mode and not "searching the plurality of original pictures in the video signal for a picture compatible with the trick mode."

In response, Krause discloses utilizing the Table to determine what types of pictures to utilize during different playback modes (column 7, line 47-column 8, line 6) so as to prevent transition artifacts (column 7, lines 47-50).

After identifying the desired picture Type, such as only I frame or I and P frames (see Table 1), the playback controller will only utilize the desired picture type during trick mode playback. As seen in Fig. 2, the controller will look at incoming frames and determine if it corresponds to the desired type before

selecting it for output (column 8, lines 7-36). The system will search through the

incoming frames, identify the desired frames *compatible with the selected trick*

play mode (as indicated in Table I) and discard any that are not compatible.

Thus, Krause clearly meets the current claim limitations, as he discloses

searching through the incoming pictures for frames compatible with the desired

trick play mode and only outputting those frames which are the desired ones.

Furthermore, it is noted that Krause discloses a specific embodiment for

fast forward playback from a storage device (column 9, lines 46-column 10, line

5) wherein the exact location of the desire I-frame is unknown (column 10, lines

6-21). In this case, Krause explicitly uses appellant's language and indicates that

a ***searching*** is performed to find the desired I-frame (column 10, lines 22-54).

Thus, appellant's arguments that Krause does not perform "searching the

plurality of original pictures in the video signal for a picture compatible with the

trick mode" are clearly incorrect.

f.   In response to appellant's arguments on pages 40-42, regarding claims 2,

11 and 12, see (e) above, where it is clearly shown how Krause meets the

current claim limitations.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/James Sheleheda/

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